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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,047	06/24/2003	Matthew Sweetland	112675-126	1879
23483	7590	06/07/2004	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR, LLP			LEON, EDWIN A	
60 STATE STREET			ART UNIT	
BOSTON, MA 02109			PAPER NUMBER	
			2833	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,047	SWEETLAND ET AL.	
	Examiner	Art Unit	
	Edwin A. León	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-34 is/are allowed.
- 6) ☒ Claim(s) 1-9, 17 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 10-16, 18-21 and 26-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/01/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 11 (Claims 1-34) is acknowledged.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means", "comprise" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 17 and 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Redmond et al. (U.S. Patent No. 5,015,197). With regard to Claim 1, Redmond et al. discloses a multi-contact woven power connector (Fig. 5), comprising: a set of loading fibers (57); a set of conductors (54), wherein each conductor (54) of the set has at least one contact point (60); and wherein each conductor (54) of the set is woven with the set of loading fibers (57) to create a weave (Fig. 13) wherein the weave (Fig. 13) defines a space (Fig. 13), and wherein the loading fibers (57) of the set are capable of delivering a contact force at each contact point (60) of the set of conductors (54). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 2, Redmond et al. discloses an electrical connection can be established between a first conductor (54) and a second conductor (54). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 3, Redmond et al. discloses the conductors (54) being self-terminating. See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 4, Redmond et al. discloses the conductors (54) being comprised of conducting wires (54). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 5, Redmond et al. discloses the conducting wires (54) having a diameter between approximately 0.0002 and approximately 0.0100 inches (Column 7, Lines 1-51). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 6, Redmond et al. discloses the conducting wires (54) being ribbon-shaped wires (54). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 7, Redmond et al. discloses the loading fibers (57) being comprised of a non-conducting material (Column 7, Lines 1-51). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 8, Redmond et al. discloses the loading fibers (57) being comprised of an elastic material (Column 7, Lines 1-51). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 9, Redmond et al. discloses the loading fibers (57) being comprised of at least one material (Column 7, Lines 1-51) from the following list: nylon, fluorocarbon, polyaramids, polyamids, conductive metal or natural fiber. See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 17, Redmond et al. discloses a mating conductor (54) having a contact mating surface (60), wherein electrical connections can be established between the contact mating surface (60) and the contact points (60) of the set of conductors (54) when the mating conductor (54) is disposed within the space (Fig. 13). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 22, Redmond et al. discloses the set of conductors (54) comprising a power circuit or a return circuit (Column 7, Lines 1-51). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 23, Redmond et al. discloses the set of loading fibers (57) being a first set of loading fibers (57), the set of conductors (54) is a first set of conductors (54), the weave (Fig. 13) is a first weave (Fig. 13) and the space (Fig. 13) is a first space (Fig. 13), the woven power connector (Fig. 5) further comprising: a second set of loading fibers (57); a second set of conductors (54), wherein each conductor (54) of the second set has at least one contact point (60); and wherein each conductor (54) of the second set is woven with the second set of loading fibers (57) to create a second weave wherein the second weave (Fig. 13) defines a second space (Fig. 13), and wherein the loading fibers (57) of the second set are capable of delivering a contact force at each contact point (60) of the second set of conductors (54). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 24, Redmond et al. discloses the first set of conductors (54) comprising a first power circuit (Column 7, Lines 1-51) and the second set of conductors (54) comprises a second power circuit (Column 7, Lines 1-51). See Figs. 11-14 and Column 7, Lines 1-51.

With regard to Claim 25, Redmond et al. discloses the first set of conductors (54) comprising a power circuit (Column 7, Lines 1-51) and the second set of conductors (54) comprises a return circuit (Column 7, Lines 1-51). See Figs. 11-14 and Column 7,

Lines 1-51.

Allowable Subject Matter

5. Claims 31-34 are allowed.
6. Claims 10-16, 18-21, 26-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The references fail to teach, disclose, or suggest, either alone or in combination, the weave forming a woven tube having the space disposed therein, a tensioning spring, wherein at least one end of each loading fiber is coupled to the tensioning spring, a plurality of tensioning springs, wherein each loading fiber has a first end and a second end, and wherein the first end of each loading fiber is coupled to a tensioning spring, the contact mating surface is convex, the mating conductor is substantially rod-shaped, a first mating conductor having a first contact mating surface, wherein electrical connections can be established between the first contact mating surface and the contact points of the first set of conductors when the first mating conductor is disposed within the first space; a second mating conductor having a second contact mating surface, wherein electrical connections can be established between the second contact mating surface and the conductors of the return circuit when the second mating conductor is disposed within the second space, a first rod-shaped mating conductor, wherein electrical connections can be established between the first rod-shaped mating

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conductor and the conductors of the power circuit when the first rod-shaped mating conductor is disposed within the first space; and a second rod-shaped mating conductor, wherein electrical connections can be established between the second rod-shaped mating conductor and the conductors of the return circuit when the second rod-shaped mating conductor is disposed within the second space and in combination with the rest of the limitations of the base and intermediate claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sutera et al. (U.S. Patent No. 4,651,163), Driller et al. (U.S. Patent No. 5,109,596), Headrick et al. (U.S. Patent No. 4,755,422), Kline (U.S. Patent No. 5,899,755) and Barile et al. (U.S. Patent No. 5,190,471) disclose woven connectors having fibers, conductors and contact points.

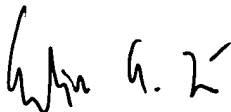
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gary Paumen
Primary Examiner



Edwin A. Leon
AU 2833

EAL
May 29, 2004